

REMARKS

## I. STATUS OF THE CLAIMS

Claims 1-2, 5, 10-11, 13, 38 and 39 are pending in the present application.

Claims 1 and 10 are the independent claims.

Claims 3, 6, 14, 24 and 33 have been cancelled without prejudice to or disclaimer of the subject matter recited therein.

Claims 1 and 10 have been amended. No new matter is believed to have been added. Proper support for the amendment of claim 10 can be found in the specification at least at paragraph [0019].

Claims 15-23, 32, 34 and 35 are withdrawn from consideration.

## II. THE REJECTION OF CLAIMS 24 AND 33 UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claim 24 is rejected as being indefinite because it allegedly depends from non-existent claim 41. Applicants respectfully traverse this rejection for the following reason. Claim 24 originally depended from claim 4 and claim 24 was amended to depend from claim 1. However, the strikethrough of the text in the previously filed amendment made claim 24 appear to depend from claim 41. Nevertheless, claim 24 has been cancelled without prejudice or disclaimer of the subject matter recited therein, thus rendering the rejection of claim 24 moot.

Claim 33 has also been cancelled without prejudice or disclaimer of the subject matter recited therein.

Accordingly, Applicants respectfully request that the rejection of claims 24 and 33 under 35 U.S.C. §112, second paragraph be withdrawn.

III. THE REJECTION OF CLAIMS 1-3, 5-6, 10-11, 13-14, 24, 33 AND 38-39 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER U.S. PATENT NO. 5,705,291 TO AMATUCCI (HEREINAFTER AMATUCCI) IN VIEW OF JAPANESE PUBLICATION 09-171813 TO HIROSHI (HEREINAFTER HIROSHI)

Applicants respectfully traverse this rejection for at least the following reasons.

Independent claim 1, as amended, recites, a positive active material composition for a rechargeable lithium battery comprising amongst other novel aspects, **at least one amorphous additive compound selected from the group consisting of a thermal-absorbent element-included hydroxide, a thermal-absorbent element-included oxyhydroxide, a thermal-absorbent element-included oxycarbonate, and a thermal-absorbent element-included hydroxycarbonate**, wherein said at least one amorphous additive compound comprises an amount at or between 0.1 weight % and 1 weight % based on the weight of the positive active material composition and wherein the **thermal-absorbent element is an element selected from the group consisting of Mg, Al, Co, K, Na, Ca, Si, Ti, Sn, V, Ge, Ga, As, and Zr.**

Amatucci discloses a positive electrode wherein the surfaces of the aggregate lithiated intercalation composition particulates comprising the positive cell electrode are coated with a passivating layer of a composition comprising a borate, lithiated borate, aluminate, lithiated aluminate, silicate, lithiated silicate, or mixtures thereof (abstract).

Amatucci further discloses using a film for coating the surface of the  $\text{LiMn}_2\text{O}_4$ , wherein suitable materials for such coating film are either in a crystalline or glassy form, such as borates or aluminates (column 4, lines 9-15).

Amatucci also discloses that these borates are mixed with the  $\text{LiMn}_2\text{O}_4$ , with about 1% by weight of  $\text{H}_3\text{BO}_3$  to fuse the  $\text{H}_3\text{BO}_3$  to the surface of the  $\text{LiMn}_2\text{O}_4$  (column 4, lines 30-40, example 1), by about 0.6% to 1% by weight (column 5, lines 15-20, example 2), by about 0.6% to 1.0% by weight (column 5, lines 42-45, example 3) and by 1% by weight (column 5, lines 54-57, example 4), wherein these ranges are the preferred ranges of the borate compound.

Accordingly, Amatucci fails to teach or suggest an **amorphous additive compound**, Amatucci rather teaches a crystalline or glassy form of a compound. Amatucci also fails to teach or suggest a **thermal-absorbent element selected from the group consisting of Mg, Al, Co, K, Na, Ca, Si, Ti, Sn, V, Ge, Ga, As, and Zr**, Amatucci rather teaches a borate film for coating the surface of the  $\text{LiMn}_2\text{O}_4$ .

Accordingly, Amatucci fails to teach or suggest the features recited in newly amended independent claim 1.

Hiroshi discloses a non-aqueous electrolyte battery having a positive electrode active material covered with an inorganic ion conductive membrane (abstract). Hiroshi

fails to teach or suggest the amount of the inorganic conductive material included in the membrane. Accordingly, Hiroshi fails to teach or suggest that the at least one amorphous additive compound comprises an amount at or between 0.1 weight % and 1 weight % based on the weight of the positive active material composition, as recited in amended independent claim 1.

Accordingly, Applicants respectfully assert that the rejection of claim 1 under 35 U.S.C. § 103(a) should be withdrawn because neither Amatucci nor Hiroshi whether taken singly or combined teach or suggest each feature of independent claim 1, as amended.

Furthermore, Applicants respectfully assert that dependent claims 2, 5, 24 and 38-39 are allowable at least because of their dependence from claim 1, and because they include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 2, 5, 24 and 38-39 also distinguish over the prior art.

Additionally, claims 3, 6 and 24 have been cancelled without prejudice or disclaimer, thus rendering the rejection of these claims moot.

Independent claim 10, as amended, recites, a positive active material composition for a rechargeable lithium battery comprising amongst other novel aspects, a positive active material comprising at least one lithiated compound; and at least one additive compound selected from the group consisting of a thermal-absorbent element-included hydroxide, a thermal-absorbent element-included oxyhydroxide, a thermal-absorbent element-included oxycarbonate, and a thermal-absorbent element-included hydroxycarbonate, wherein the **thermal-absorbent element is one of amorphous A1 and crystalline B**, and wherein said at least one additive compound comprises an amount at or between 0.1 weight % and 1 weight % based on the weight of the positive active material composition.

As noted above, Amatucci fails to teach or suggest an **amorphous compound**, as recited in amended independent claim 10.

As also noted above, Hiroshi fails to teach or suggest such novel aspects of the present invention and thus cure the deficiencies of Amatucci.

Accordingly, Applicants respectfully assert that the rejection of claim 10 under 35 U.S.C. § 103(a) should be withdrawn because neither Amatucci nor Hiroshi, whether

taken singly or combined teach or suggest each feature of independent claim 10, as amended.

Furthermore, Applicants respectfully assert that dependent claims 11 and 13 are allowable at least because of their dependence from claim 10, and because they include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 11 and 13 also distinguish over the prior art.

Additionally, claims 14 and 33 have been cancelled without prejudice or disclaimer, thus rendering the rejection of these claims moot.

IV. THE REJECTION OF CLAIMS 1-3, 5-6, 10-11, 13-14, 24 AND 33 UNDER THE JUDICIALLY CREATED DOCTRINE OF OBVIOUSNESS-TYPE DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 1-3, 11 AND 15 OF U.S. PATENT NO. 6,797,435 IN VIEW OF AMATUCCI.

Since claims 1-3, 5, 10-11 and 13 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claim would be premature. MPEP 804(I)(B).

As such, it is respectfully requested that the applicant be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of the claim under 35 U.S.C. §§ 112, 102 and 103 are resolved.

V. THE REJECTION OF CLAIMS 1-3, 5-6, 10-11, 13-14, 24 AND 33 UNDER THE JUDICIALLY CREATED DOCTRINE OF OBVIOUSNESS-TYPE DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 1-5, AND 12-17 OF U.S. PATENT NO. 6,753,111

Since claims 1-3, 5, 10-11 and 13 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claim would be premature. MPEP 804(I)(B).

As such, it is respectfully requested that the applicant be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of

the claim under 35 U.S.C. §§ 112, 102 and 103 are resolved.

VI. THE REJECTION OF CLAIMS 1-3, 5-6, 10-11, 13-14, 24 and 33 UNDER THE JUDICIALLY CREATED DOCTRINE OF OBVIOUSNESS-TYPE DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 1-15, 28-30 AND 32-35 OF CO-PENDING APPLICATION NO. 10/189,384 (U.S. Patent Application Publication No. 2003/54250)

Since claims 1-3, 5, 10-11 and 13 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claim would be premature. MPEP 804(I)(B).

As such, it is respectfully requested that the applicant be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of the claim under 35 U.S.C. §§ 112, 102 and 103 are resolved.

VII. THE REJECTION OF CLAIMS 1-3, 5-6, 10-11, 13-14, 24 AND 33 UNDER THE JUDICIALLY CREATED DOCTRINE OF OBVIOUSNESS-TYPE DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 1-5 AND 23-38 OF CO-PENDING APPLICATION NO. 10/072,923 IN VIEW OF AMATUCCI

Since claims 1-3, 5, 10-11 and 13 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claim would be premature. MPEP 804(I)(B).

As such, it is respectfully requested that the applicant be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of the claim under 35 U.S.C. §§ 112, 102 and 103 are resolved.

VIII. THE REJECTION OF CLAIMS 1-3, 5-6, 10-11, 13-14, 24 AND 33 UNDER THE JUDICIALLY CREATED DOCTRINE OF OBVIOUSNESS-TYPE DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 1-10 AND 25-37 OF CO-PENDING APPLICATION NO. 09/897,445 (U.S. Patent Application Publication No. 2002/0071990)

Since claims 1-3, 5, 10-11 and 13 of the instant application have not yet been

indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claim would be premature. MPEP 804(I)(B).

As such, it is respectfully requested that the applicant be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of the claim under 35 U.S.C. §§ 112, 102 and 103 are resolved.

**IX. THE REJECTION OF CLAIMS 1-3, 5-6, 10-11, 13-14, 24 AND 33 UNDER THE JUDICIALLY CREATED DOCTRINE OF OBVIOUSNESS-TYPE DOUBLE PATENTING AS BEING UNPATENTABLE OVER CLAIMS 1-10 AND 25-37 OF CO-PENDING APPLICATION NO. 10/627,725 (U.S. Patent Publication No. 2004/0018429)**

Since claims 1-3, 5, 10-11 and 13 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claim would be premature. MPEP 804(I)(B).

As such, it is respectfully requested that the applicant be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of the claim under 35 U.S.C. §§ 112, 102 and 103 are resolved.

**X. CONCLUSION**

In accordance with the foregoing, it is respectfully submitted that all outstanding rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited and possibly concluded by the Examiner contacting the undersigned attorney for a telephone interview to discuss any such remaining issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 503333.

Respectfully submitted,

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